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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

| | | |
|--|---|---------------------------|
| In re Application of | : | Customer Number: 46320 |
| | : | |
| Elizabeth BAGLEY, et al. | : | Confirmation Number: 5361 |
| | : | |
| Application No.: 10/714,690 | : | Group Art Unit: 2626 |
| | : | |
| Filed: November 17, 2003 | : | Examiner: P. Shah |
| | : | |
| For: SELF-CONFIGURING KEYWORD DERIVATION | : | |

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed June 19, 2008, and in response to the Examiner reopening prosecution in the Office Action dated September 18, 2008, wherein Appellants appeal from the Examiner's rejection of claims 1-12.

I. REAL PARTY IN INTEREST

This application is assigned to IBM Corporation by assignment recorded on February 15, 2006, at Reel 017261, Frame 0241.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals and interferences.

III. STATUS OF CLAIMS

Claims 1-12 are pending and four-times rejected in this Application. It is from the multiple rejections of claims 1-12 that this Appeal is taken.

IV. STATUS OF AMENDMENTS

The claims have not been amended subsequent to the imposition of the Fourth Office Action dated September 18, 2008 (hereinafter the Fourth Office Action).

V. SUMMARY OF CLAIMED SUBJECT MATTER

1 Referring to Figure 1 and also to independent claim 1, a keyword generation system is
2 disclosed. The system includes a content parser, a dictionary, a list of keyword candidates, and a
3 keyword generation process. The content parser is configured to parse individual words and
4 phrases in a selected portion 130 of content 110 (lines lines 6-8 of paragraph [0022]). The
5 dictionary 150 of words and phrases is specific to a particular domain associated with the content
6 110 (lines 5-8 of paragraph [0016]). The list 160 of keyword candidates comprises a plurality of
7 words and phrases specific to the particular domain, and the counter is included for each of the
8 words and phrases in the list 150 (lines 6-9 of paragraph [0017]). The keyword generation
9 process 200 is both coupled to each of the content parser, dictionary 150, the list 160, and the
10 counter (lines 2-4 of paragraph [0016]). The keyword generation process 200 also (i) identifies
11 the words and phrases specific to the particular domain in the selected portion 130 of content 110
12 (lines 2-4 of paragraph [0017]), (ii) writes the identified words and phrases to the list 160 of
13 keyword candidates (lines 5-7 of paragraph [0017]), (iii) increments the counter for each of the
14 words and phrases in the list 160 each time the keyword generation process 200 locates each of

1 the words and phrases in the selected portion 130 of content 110 (lines 7-9 of paragraph [0017]),
2 and (iv) selects one or more of the words and phrases in the list 160 as keywords 170 for the
3 content 110 based upon the counter for each of the words and phrases in the list 160 (lines 2-5 of
4 paragraph [0021]).

5 Referring to Figure 2A and also to independent claim 3, a keyword generation method is
6 disclosed. In blocks 215, 220, words and phrases in a selected portion of content are located
7 with the words and phrases being specific to a particular domain (lines 1-3 of paragraph [0023]).
8 In block 225, a single instance of each of the located words and phrases is added to a list of
9 keyword candidates (lines 3-4 of paragraph [0023]). In block 230, for each located word and
10 phrase which already had been added to the list of keyword candidates, a counter associated with
11 the located word and phrase is incremented (lines 4-5 of paragraph [0024]). In block 255,
12 keywords from the list of keyword candidates are selected based upon words and phrases in the
13 list having a highest counter value (lines 4-7 of paragraph [0028]).

14 Referring to Figure 2A and also to independent claim 8, a machine readable storage
15 having stored thereon a computer program for keyword generation is disclosed. The computer
16 program comprises a routine set of instructions which when executed by the machine cause the
17 machine to perform the following steps. In blocks 215, 220, words and phrases in a selected
18 portion of content are located with the words and phrases being specific to a particular domain
19 (lines 1-3 of paragraph [0023]). In block 225, a single instance of each of the located words and
20 phrases is added to a list of keyword candidates (lines 3-4 of paragraph [0023]). In block 230,
21 for each located word and phrase which already had been added to the list of keyword
22 candidates, a counter associated with the located word and phrase is incremented (lines 4-5 of
23 paragraph [0024]). In block 255, keywords from the list of keyword candidates are selected

- 1 based upon words and phrases in the list having a highest counter value (lines 4-7 of paragraph
- 2 [0028]).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 3-7 were rejected under 35 U.S.C. § 101;
2. Claim 1 was rejected under 35 U.S.C. § 103 for obviousness based upon Kiyama et al. U.S. Patent No. 5,642,518 (hereinafter Kiyama), in view of Xun et al., U.S. Patent No. 6,859,771 (hereinafter Xun), and Ho et al., U.S. Patent No. 6,571,240 (hereinafter Ho);
3. Claims 3, 7-8, and 12 were rejected under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun;
4. Claim 2 was rejected under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun, Ho and Hita et al., U.S. Patent No. 6,081,774 (hereinafter Hita);
5. Claims 4 and 9 were rejected under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun and Hita; and
6. Claims 5-6 and 10-11 were rejected under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun and Yoshimi et al., U.S. Patent No. 6,374,209 (hereinafter Yoshimi).

VII. ARGUMENT

THE REJECTION OF CLAIMS 3-7 UNDER 35 U.S.C. § 101

For convenience of the Honorable Board in addressing the rejections, claims 4-7 stand or fall together with independent claim 3.

Independent claim 3 is directed to a "keyword generation method" (emphasis added). 35 U.S.C. § 101 states that:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Within In re Bilski, Appeal No. 2007-1130 (Fed. Cir. 2008), the Federal Circuit "[clarified] the standards applicable in determining whether a claimed method constitutes a statutory 'process' under § 101." The Federal Circuit framed the issue as to whether a claimed method constitutes a statutory process as follows:

The true issue before us then is whether Applicants are seeking to claim a fundamental principle (such as an abstract idea) or a mental process. And the underlying legal question thus presented is what test or set of criteria governs the determination by the Patent and Trademark Office ("PTO") or courts as to whether a claim to a process is patentable under § 101 or, conversely, is drawn to unpatentable subject matter because it claims only a fundamental principle.

At the outset, Appellants note that the Examiner has neither alleged nor provided any substantial evidence to support a finding that claim 3 attempts to claim either a fundamental principle or a mental process. Therefore, the Examiner's has failed to set forth a prima facie case under 35 U.S.C. § 101.

1 However, should the Examiner put forth substantial evidence to establish that claim 1 recites
2 a fundamental principle or is a mental process, the Federal Circuit within In re Bilski looked to the
3 following test to determine whether a process claim is narrowly tailored so as to not preempt all uses
4 of the fundamental principle:

5 A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular machine or
6 apparatus, or (2) it transforms a particular article into a different state or thing.
7

8 Thus, the machine-or-transformation test is a two-branched inquiry – a method claim satisfies 35
9 U.S.C. § 101 by being tied to a particular machine or transforming an article. Gottschalk v. Benson,
10 409 U.S. 63, 70 (1972).
11

12 Turning to the first branch, the Examiner has failed to present any substantial evidence to
13 support a finding that claim 1 is not tied to a particular machine or apparatus. The lack of the
14 Examiner's analysis notwithstanding, paragraph [0017] described that the claimed keyword
15 generation process "can be programmed." As recognized by one having ordinary skill in the art,
16 an abstract idea is not programmed. Instead, only a device (e.g., a computer device) can be
17 programmed. Thus, the method of claim 3 is tied to a particular apparatus and meets the first
18 test, claim 1 is directed to statutory subject matter under 35 U.S.C. § 101.
19

20 As to the second branch, claim 3 transforms a particular article into a different state or
21 thing. As recited in claim 3, "a list of keyword candidates is added to, and a counter is
22 incremented. The acts of "adding" and "incrementing" transform one set of data into another.
23 Therefore, claim 3 is also directed to statutory subject matter under 35 U.S.C. § 101 since claim
24 3 transform a particular article into a different state or thing.
25

**THE REJECTION OF CLAIM 1 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON
KIYAMA IN VIEW OF XUN AND HO**

For convenience of the Honorable Board in addressing the rejections, claim 1 stands or falls alone.

On October 10, 2007, the Patent Office issued the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*," 73 Fed. Reg. 57,526 (2007) (hereinafter the Examination Guidelines). Section III is entitled "Rationales To Support Rejections Under 35 U.S.C. 103." Within this section is the following quote from the Supreme Court: "rejections on obviousness grounds cannot be sustained by merely conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Referring to the first column on page 57,529 of the Examination Guidelines, the following is a list of rationales that may be used to support a finding of obviousness under 35 U.S.C. § 103:

(A) Combining prior art elements according to known methods to yield predictable results;

(B) Simple substitution of one known element for another to obtain predictable results;

(C) Use of known technique to improve similar devices (methods, or products) in the same way;

(D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Upon viewing the Examiner's analysis on pages 8 and 9 of the Second Office Action, the Examiner appears to be employing rationales (B), (D), and (E).

Referring to rationale (B), as discussed on page 57,530 of the Examination Guidelines, the following findings of fact must be articulated by the Examiner:

(1) a finding that the prior art contained a device (method, product, etc.) which differed from the claimed device by the substitution of some components (step, element, etc.) with other components;

(2) a finding that the substituted components and their functions were known in the art;

(3) a finding that one of ordinary skill in the art could have substituted one known element for another, and the results of the substitution would have been predictable; and

(4) whatever additional findings based on the *Graham* factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

Referring to rationale (D), as discussed on page 57,531 of the Examination Guidelines, the following findings of fact must be articulated by the Examiner:

(1) a finding that the prior art contained a “base” device (method, or product) upon which the claimed invention can be seen as an “improvement;”

(2) a finding that the prior art contained a known technique that is applicable to the base device (method, or product);

(3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results and resulted in an improved system; and

(4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

Referring to rationale (E), as discussed on page 57,532 of the Examination Guidelines, the following findings of fact must be articulated by the Examiner:

(1) a finding that at the time of the invention, there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem;

(2) a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem;

(3) a finding that one of ordinary skill in the art could have pursued the known potential solutions with a reasonable expectation of success; and

(4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

Referring to the paragraph entitled "Office Personnel as Factfinders" on page 57,527 of the Examination guidelines, the following was stated:

Office personnel fulfill the critical role of factfinder when resolving the *Graham* inquiries. It must be remembered that while the ultimate determination of obviousness is a legal conclusion, the underlying *Graham* inquiries are factual. When making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied. In certain circumstances, it may also be important to include explicit findings as to how a person of ordinary skill would have understood prior art teachings, or what a person of ordinary skill would have known or could have done. Factual findings made by Office personnel are the necessary underpinnings to establish obviousness.

In Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), the Supreme Court set forth the factual inquiries that are to be applied when establishing a background for determining obviousness under 35 U.S.C. 103. These factual inquiries are summarized as follows:

- (A) Determine the scope and content of the prior art;
- (B) Ascertain the differences between the prior art and the claims at issue;
- (C) Resolve the level of ordinary skill in the pertinent art; and
- (D) Evaluate any indicia of nonobviousness.

However, in order to make a proper comparison between the claimed invention and the prior art, the language of the claims must first be properly construed. See In re Paulsen, 30 F.3d 1475, 1479 (Fed. Cir. 1994). See also, Panduit Corp. v. Dennison Mfg. Co., 810 F.2d 1561, 1567-68 (Fed. Cir. 1987) (In making a patentability determination, analysis must begin with the question, "what is the invention claimed?" since "[c]laim interpretation, ... will normally control the remainder of the decisional process.") See Gechter v. Davidson, 116 F.3d 1454, 1460 (Fed. Cir. 1997) (requiring explicit claim construction as to any terms in dispute).

1 Upon reviewing the Examiner's analysis in view of the requirements discussed above
2 necessary for the Examiner to establish a prima facie case of obviousness, Appellants recognize
3 several deficiencies in the Examiner's analysis.
4

5
6 Claim 1

7 At the outset, Appellants note that the Examiner previously rejected claim 1 based upon
8 Kiyama in view of Ho. In the present rejection, the Examiner is relying upon Kiyama in view of
9 Xun and Ho. In comparing the Examiner's assertion, on pages 4 and 5 of the Fourth Office
10 Action, as to what the primary reference of Kiyama allegedly teaches with the Examiner's
11 assertion, on pages 5 and 6 of the Third Office Action. Appellants have been unable to discern
12 any differences in the Examiner's analysis as to Kiyama.
13

14 Referring to the last paragraph on page 5 of the Fourth Office Action, the Examiner is
15 now relying upon newly cited Xun to teach "parsing content into phrases and words (see col. 4,
16 lines 34-36, phrases, word). Finally, referring to the last full paragraph on page 6 of the Third
17 Office Action and to the third full paragraph on page 6 of the Fourth Office Action, the Examiner
18 appears to be relying upon Ho to teach the same limitations.
19

20 Thus, a comparison between the Third and Fourth Office Actions as to the Examiner's
21 rejection of claim 1 yields that Kiyama and Ho are being used to teach the same limitations and
22 the newly cited Xun is being used to teach "parsing content into phrases and words." The only

1 other change in the Examiner's analysis is the new "obviousness analysis" presented in the first
2 and fourth full paragraphs on page 6 of the Fourth Office Action.

3
4 Referring to the Examiner's newly cited reference of Xun, the Examiner asserted that Xun
5 teaches "parsing content into phrases and words." To be clear, the Examiner's cited passage of
6 column 4, lines 34-36 states:

7 The shallow parser 140 parses phrases or sentences of the selected non-native text into
8 individual translation units (e.g., phrases, words). (emphasis added)
9

10 What the Examiner's analysis neglects to consider is that Xun is non-analogous prior art.

11
12 Whether a prior art reference is from a nonanalogous art involves (a) determining
13 whether the reference is within the same field of endeavor and (b) determining whether the
14 reference is reasonably pertinent to a known problem in the art. In re Clay, 23 USPQ2d 1058
15 (Fed Cir. 1992). If the prior art is outside the inventor's field of endeavor, the inventor will only
16 be presumed to have knowledge of prior art that is reasonably pertinent to a known need or
17 problem in the field of endeavor. KSR International Co. v. Teleflex Inc., 550 U.S. ___, ___, 82
18 USPQ2d 1385, 1397 (2007). The Examiner is also charged to consider "'the reality of the
19 circumstances' ... in other words, common sense" to determine what field a person of ordinary
20 skill in the art would reasonably be expected to look. In re Oetiker, 977 F.2d 1443, 24 USPQ2d
21 1443 (Fed. Cir. 1992).

22
23 The claimed invention and the Examiner's other two cited references of Kiyama and Ho
24 are directed to keyword generation with the keywords being used to enable the efficient
25 searching/characterization of data/content. In a very different field, Xun teaches a natural

1 language translator with the specific disclosure being related to an application for identifying
2 base noun phrases. Referring to column 4, lines 63-67, the shallow parser 140 of Xun
3 characterizes the words and phrases for further translation selection. As would be recognized by
4 those skilled in the art of translation, a word in one language may be translated in a phrase of
5 another language and vice-versa. Not only is Xun outside the field of endeavor of the present
6 application, the Examiner has failed to establish that Xun is reasonably pertinent to a known
7 need or problem in the field of endeavor. Thus, Xun is non-analogous prior art.

8
9
10 The Examiner's obviousness analysis regarding Xun is found in the first full paragraph on
11 page 6 of the Fourth Office Action and is reproduced below:

12 It would have been obvious to one of ordinary skilled in the art at the time the invention
13 was made to have substituted the parser as taught by Kiyama *et al.* with the parser for parsing
14 phrases and words as taught by Xun in order to obtain the predictable result of obtaining
15 individualized units of text (see KSR vs. Teleflex, Rationales, B, D, and E).
16

17 The Examiner's alleged "obviousness analysis" is woefully inadequate. As reproduced above,
18 the Examination Guidelines state that the Examiner must articulate certain findings of fact with
19 regard to each of the rationales. This burden has not been met or even attempted to be met.

20
21 Referring to rationale B, the first finding is that the prior art contained a device (method,
22 product, etc.) which differed from the claimed device by the substitution of some components
23 (step, element, etc.) with other components. This finding cannot be made. Xun differs from
24 Kiyama by significantly more than different parsers. In fact, both having parsers is one of the
25 few similarities that Xun has with Kiyama since Kiyama is directed to keyword generation and
26 Xun is directed to translation.

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The Examiner also cannot make a finding that "the results of the substitution would have been predictable." By substituting the parser of Kiyama with the parser of Xun, instead of words being generated, individual translation units would be generated. The Examiner, however, has produced no evidence that "individual translation units" are acceptable alternatives to keywords.

Referring to rationale D, the first finding is that the prior art contained a "base" device (method, or product) upon which the claimed invention can be seen as an "improvement." The Examiner has not made this finding, and Appellants are unclear how a parser generating "individual translation units" could be seen as an "improvement" over a parser that generates words when system of Kiyama is set up to generate keywords.

The Examiner also cannot make a finding that the prior art contained a known technique that is applicable to the base device. Although the parsers are both applicable to documents, the "document" is not the base device. Instead, the base device is the keyword generator. Moreover, as discussed above with regard to rationale C, the Examiner cannot make a finding that "the results of the substitution would have been predictable."

Referring to rationale E, the first finding is that there had been a recognized problem or need in the art, which may include a design need or market pressure to solve a problem. However, the Examiner has not identified this alleged problem, design need, or market pressure. Moreover, the Examiner has failed to make a finding that there had been a finite number of identified, predictable potential solutions to the recognized need or problem. Moreover, the

1 Examiner has failed to make a finding that one of ordinary skill in the art could have pursued the
2 known potential solutions with a reasonable expectation of success.

3
4 Therefore, for the reasons described above, Appellants respectfully submit that the
5 Examiner has failed to establish a proper analysis in concluding that it would have been obvious
6 to modify Kiyama in view of Xun.

7
8
9 The Examiner's other obviousness analysis regarding Ho is found in the fourth full
10 paragraph on page 6 of the Fourth Office Action and is reproduced below:

11 It would have been obvious to one of ordinary skilled in the art at the time the invention
12 was made to have modified or improved the dictionary as taught by Kiyama *et al.* in view of Xun
13 with the substitution of a domain-specific dictionary as taught by Ho *et al.* for obtaining the
14 predictable result of quicker retrieval (see Ho col. 4, lines 20-23) for information related to a
15 specific domain (See KSR vs. Teleflex, Rationales B, D, and E)

16
17 In response, Appellants rely upon the arguments previously presented in the First Appeal
18 Brief (reproduced below). On page 4 of the Second Response, Appellants presented the
19 following arguments with regard to the Examiner's obviousness analysis. The Examiner's
20 asserted motivation for the combination (i.e., "for reduction in memory as would be apparent to
21 one skilled in the art") is completely unsupported by the teachings of the applied prior art. A
22 discussion of "reduction is memory" is nowhere to be found in the teachings of Ho. Moreover,
23 the teachings of Ho actually teach the opposite. Specifically, referring to Fig. 4 and column 6,
24 lines 31-36, Ho describes the use of three separate dictionaries (i.e., a common dictionary 202, a
25 negative dictionary 204, and a domain-specific dictionary 206), which would increase the
26 amount of memory needed, as compared to the "keyword-negligible word dictionary d" taught

1 by Kiyama. Since the Examiner's proposed common sense rationale for modifying Kiyama in
2 view of Ho is not supported by the teachings of the applied prior, Appellants must presume that
3 the Examiner's only rationale for combining the applied prior art in the manner suggested was
4 based upon impermissible hindsight reconstruction based upon the teachings of Appellants'
5 disclosure.

6
7 The Examiner's response to these arguments is found in the paragraph spanning pages 2
8 and 3 of the Third Office Action and is reproduced below:

9 The Examiner withdraws the motivation for reduction in memory but maintains the motivation
10 that quicker retrieval and an appropriate response based on the category is retrieved (see Ho col. 2,
11 lines 10-40). Hence, the combination of Kiyama in view of Ho teaches the cited limitations of
12 claim 1. In response to applicant's argument that the examiner's conclusion of obviousness is
13 based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness
14 is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes
15 into account only knowledge which was within the level of ordinary skill at the time the claimed
16 invention was made, and does not include knowledge gleaned only from the applicant's disclosure,
17 such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA
18 1971).

19
20 The Examiner's citation of In re McLaughlin does not address Appellants' contention that the
21 Examiner's proposed obviousness analysis appears to be solely based upon hindsight
22 reconstruction.

23
24 The Examiner's new alleged rationale for the combination is the benefit of "quicker
25 retrieval." However, the quicker retrieval described by Ho relates to helping a search engine
26 respond to a user's question (see the Examiner's cited passage within Ho of column 4, lines 20-
27 23). Such a benefit, however, does not apply to the primary reference of Kiyama. The "general
28 dictionary" of Kiyama is used to identify words in text (see column 4, lines 58-63). A content-
29 based dictionary, however, would include a reduced number of words. This reduced number of
30 words might be useful in providing quicker retrieval based upon a content-related query to a

1 search engine. However, when the dictionary is used to identify words in a text, the absence of
2 certain words in the context-base dictionary would lead to certain words of the text not being
3 identified. If these certain words of the text were not identified, based upon the teachings of
4 Kiyama, these words could not be classified. Thus, the Examiner's proposed modification would
5 reduce the capabilities of Kiyama's system, and thus, Appellants' position is that such a
6 modification would not have been obvious to one having ordinary skill in the art.

7
8 **THE REJECTION OF CLAIMS 3, 7-8, AND 12 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS**
9 **BASED UPON KIYAMA IN VIEW OF XUN**

10 For convenience of the Honorable Board in addressing the rejections, claims 3, 7-8 and
11 12 stand or fall together with independent claim 1.

12
13 **Claims 3 and 8**

14 On page 7 of the Third Office Action and also in the first full paragraph on page 7 of the
15 Fourth Office Action, the Examiner asserted the following with regard to the teachings of
16 Kiyama:

17 locating words and phrases (see col. 4, lines 58-60) in a selected portion of content (see
18 Figure 3, obtain data of one text sequence 12), said words and phrases being specific to a
19 particular domain (see col. 1, lines 4-5) (e.g. In the reference that keywords associated with a
20 domain type is extracted and is thus specific to a particular domain depending on the word
21 detected).

22
23 Appellants respectfully disagree with the Examiner's analysis. Although the Examiner asserts
24 that column 4, lines 58-60 discloses the claimed "locating words and phrases," Appellants do not
25 agree. This passage cited by the Examiner refers to "words" but not "phrases." Moreover, Fig. 3
26 does not refer to a "selected portion" of content. Regarding the claimed "said words and phrases
27 being specific to a particular domain," Appellants incorporate herein, as also applying to the

1 present rejection, the arguments previously presented with regard to similar terminology found in
2 claim 1.

3
4 Therefore, for the above-described reasons, Appellants respectfully submit that the
5 imposed rejection of claims 3, 7-8, and 12 under 35 U.S.C. § 103 for obviousness based upon
6 Kiyama in view of Xun is not viable.

7
8 **THE REJECTION OF CLAIM 2 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED UPON**
9 **KIYAMA IN VIEW OF XUN, HO AND HITA**

10 For convenience of the Honorable Board in addressing the rejections, claim 2 stands or
11 falls together with independent claim 1.

12
13 Claim 2 depends from independent claim 1, and Appellants incorporate herein the
14 arguments previously advanced in traversing the imposed rejection of claim 1 under 35 U.S.C. §
15 103 for obviousness based upon Kiyama in view of Xun and Ho. The additional reference to Hita
16 does not cure the argued deficiencies of the combination of Kiyama, Xun, and Ho. Accordingly,
17 even if one having ordinary skill in the art were motivated to modify the combination of Kiyama,
18 Xun, and Ho in view of Hita, the proposed combination of references would not yield the claimed
19 invention. Appellants, therefore, respectfully submit that the imposed rejection of claim 2 under
20 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun, Ho, and Hita is not viable.

**THE REJECTION OF CLAIMS 4 AND 9 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS BASED
UPON KIYAMA IN VIEW OF HITA**

For convenience of the Honorable Board in addressing the rejections, claims 4 and 9 stand or fall together with independent claim 3.

Claims 4 and 9 respectively depend from independent claims 3 and 8, and Appellants incorporate herein the arguments previously advanced in traversing the imposed rejection of claims 3 and 8 under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun. The tertiary reference to Hita does not cure the argued deficiencies of Kiyama and Xun. Accordingly, even if one having ordinary skill in the art were motivated to modify the combination of Kiyama and Xun in view of Hita, the proposed combination of references would not yield the claimed invention. Appellants, therefore, respectfully submit that the imposed rejection of claims 4 and 9 under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun and Hita is not viable.

**THE REJECTION OF CLAIMS 5-6 AND 10-11 UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS
BASED UPON KIYAMA IN VIEW OF XUN AND YOSHIMI**

For convenience of the Honorable Board in addressing the rejections, claims 6 and 10-11 stand or fall together with dependent claim 5.

On pages 8 and 9 of the Second Response, Appellants presented the following arguments. On page 9 of the Second Office Action,¹ the Examiner asserted the following:

However, Kiyama *et al.*, does not specifically teach the detecting a variation in font attributes.

¹ These exact same assertions are also found on pages 11 and 12 of the Third Office Action and on page 11 of the Fourth Office Action.

Yoshimi *et al.* does teach the detecting of words based upon font attributes (see col. 13, lines 1-35, character ornament, style and size is detected for important word).

It would have been obvious to one of ordinary skilled in the at the time the invention was made to have modified the key word generation taught by Kiyama *et al.* with the inclusion of font detection as taught by Yoshimi *et al.* The motivation to have combined the two references involves the distinction between important words and unimportant words comparing other words in the text [see Yoshimi et at, col. 13, lines 1-35) for faster retrieval of possible keywords, which benefits the keyword generation presented by Kiyama et at by detecting keywords denoted by font to be important as an alternative method for keyword detection.

Appellants respectfully submit that the Examiner's proposed combination is not supported by the teachings of Kiyama and Yoshimi. Yoshimi describes locating words based upon font attributes for the purpose of analyzing text structure. This is not comparable to generating a list of keywords for particular content. Also, although the Examiner asserts that Yoshimi distinguishes between important words (i.e., allegedly those words with a variation in font attributes) and unimportant words, the Examiner has failed to establish that one having ordinary skill in the art, based upon the teachings of Kiyama, would consider that distinguishing words or phrases by importance would be valuable.

Based upon the teachings of Kiyama, apparently all of the words within the content are parsed and the results stored in a word partition table b (see column 4, lines 61-63). Thus, all the words in the content are already added to "said list of keyword candidates." Since, as taught by Kiyama, all the words in the content are added the list of keyword candidates, there would be no need to "[select] a string in said selected portion of content affect by said variation," as claimed, and "[add] said string to said list of keyword candidates." To do so would be redundant, and thus not obvious.

The Examiner's response to these arguments is found on page 4 of the Third Office Action and is reproduced below:

1 In the proposed combination of Kiyama in view of Yoshimi, Yoshimi presents the detection of
2 variation in font attributes for location of important words (see col. 13, lines 1-35). The result is
3 then stored. Kiyama would benefit from the teachings of Yoshimi in order to determine the
4 keyword candidates. Referring to the Kiyama reference, in col. 4 lines 58- 64, text is divided and
5 looked up in a dictionary before being registered in a word partitioning table. However, Yoshimi
6 teaches an alternative method of detecting words, aside from using a dictionary to detect important
7 words. In col. 9, lines 42-48, dictionary is used to detect important words based on parts of speech.
8 However, as described in col. 12, lines 45-col. 13, lines 35, an alternative recognizing of important
9 words is shown, namely font attributes. Hence, The combination of Kiyama in view of Yoshimi
10 would have been obvious to one skilled in the art to detecting keywords based on font
11 characteristics.
12

13 The Examiner's analysis both ignores Appellants' prior arguments and misstates the teachings of the
14 prior art. In particular, the Examiner is improperly blurring the teachings as to detecting words and
15 detecting important words.
16

17 As already discussed in Appellants' original argument, Kiyama identifies all words. The
18 dictionary referred to by the Examiner is used by Kiyama to confirm that that the portion of text
19 data is a word. Contrary to the Examiner's assertion, Yoshimi does not teach an *alternative* method
20 of detecting words. Instead, Yoshimi teaches a method of detecting important words. However, as
21 already argued, Kiyama is indifferent to *important* words since all words are considered by Kiyama.
22 To modify Kiyama in view of Yoshimi would be to add complexity without any benefit.
23

24 Appellants also notes that the Examiner does not even establish a rationale why one having
25 ordinary skill in the art would have been realistically impelled to modify Kiyama in view of
26 Yoshimi. Instead, the Examiner merely states that Yoshimi is an alternative. Although the
27 Examiner asserts on page 11 of the Third Office Action that the benefit would be "for faster
28 retrieval of possible keywords," the Examiner has failed to produce any substantial evidence to
29 support such an allegation. Not only has the Examiner failed to produce any substantial evidence,
30 the Examiner has not even set forth a reasoned explanation as to why one having ordinary skill in

1 the art would have had an expectation of success in realizing a substantial benefit from the
2 modification. Since Kiyama already teaches identifying all the words, the Examiner's proposed
3 modification would appear to slow down Kiyama by adding additional steps.

4
5 Despite the above-reproduced arguments being presented in the First Appeal Brief, the
6 Examiner did not respond to these arguments in the Fourth Office Action. Therefore, for the
7 reasons presented above, Appellants respectfully submit that the imposed rejection of claims 5-6
8 and 10-11 under 35 U.S.C. § 103 for obviousness based upon Kiyama in view of Xun and
9 Yoshimi is not viable.

10
11 Conclusion

12 Based upon the foregoing, Appellants respectfully submit that the Examiner's rejections
13 under 35 U.S.C. §§ 101, 103 are not viable. Appellants, therefore, respectfully solicit the Honorable
14 Board to reverse the Examiner's rejections under 35 U.S.C. §§ 101, 103.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. §§ 1.17, 41.20, and in connection with the filing of this paper, including extension of time fees, to Deposit Account 09-0461, and please credit any excess fees to such deposit account.

Date: December 8, 2008

Respectfully submitted,

/Scott D. Paul/

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CUSTOMER NUMBER 46320

VIII. CLAIMS APPENDIX

1. A keyword generation system comprising:
 - a content parser configured to parse individual words and phrases in a selected portion of content;
 - a dictionary of words and phrases specific to a particular domain associated with said content;
 - a list of keyword candidates comprising a plurality of words and phrases specific to said particular domain;
 - a counter for each of said words and phrases in said list; and,
 - a keyword generation process both coupled to each of said content parser, dictionary, said list, and said counter and also programmed to identify said words and phrases specific to said particular domain in said selected portion of content, to write said identified words and phrases to said list of keyword candidates, to increment said counter for each of said words and phrases in said list each time said keyword generation process locates each of said words and phrases in said selected portion of content, and to select one or more of said words and phrases in said list as keywords for said content based upon said counter for each of said words and phrases in said list.
2. The system of claim 1, further comprising a list of common words coupled to said keyword generation process.
3. A keyword generation method comprising the steps of:

locating words and phrases in a selected portion of content, said words and phrases being specific to a particular domain;

adding a single instance of each of said located words and phrases to a list of keyword candidates;

for each located word and phrase which already had been added to said list of keyword candidates, incrementing a counter associated with said located word and phrase; and,

selecting keywords from said list of keyword candidates based upon words and phrases in said list having a highest counter value.

4. The method of claim 3, further comprising the step removing from consideration from said selected portion of content each of every word and phrase in said list of keyword candidates and words and phrases which are common in nature.

5. The method of claim 3, further comprising the steps of:

detecting a variation in font attributes in said selected portion of content;

selecting a string in said selected portion of content affected by said variation; and,

adding said string to said list of keyword candidates.

6. The method of claim 5, further comprising the step of subsequently identifying said string as a word and phrase which is specific to said particular domain.

7. The method of claim 3, further comprising the step of repeated performing the locating, adding and incrementing steps for selected chunks of said selected portion of content until no content remains to be processed.

8. A machine readable storage having stored thereon a computer program for keyword generation, the computer program comprising a routine set of instructions which when executed by the machine cause the machine to perform the steps of:

locating words and phrases in a selected portion of content, said words and phrases being specific to a particular domain;

adding a single instance of each of said located words and phrases to a list of keyword candidates;

for each located word and phrase which already had been added to said list of keyword candidates, incrementing a counter associated with said located word and phrase; and,

selecting keywords from said list of keyword candidates based upon words and phrases in said list having a highest counter value.

9. The machine readable storage of claim 8, further comprising the step removing from consideration from said selected portion of content each of every word and phrase in said list of keyword candidates and words and phrases which are common in nature.

10. The machine readable storage of claim 8, further comprising the steps of:

detecting a variation in font attributes in said selected portion of content;

selecting a string in said selected portion of content affected by said variation;

adding said string to said list of keyword candidates.

11. The machine readable storage of claim 10, further comprising the step of subsequently identifying said string as a word and phrase which is specific to said particular domain.

12. The machine readable storage of claim 8, further comprising the step of repeated performing the locating, adding and incrementing steps for selected chunks of said selected portion of content until no content remains to be processed.

IX. EVIDENCE APPENDIX

No evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132 of this title or of any other evidence entered by the Examiner has been relied upon by Appellants in this Appeal, and thus no evidence is attached hereto.

X. RELATED PROCEEDINGS APPENDIX

Since Appellants are unaware of any related appeals and interferences, no decision rendered by a court or the Board is attached hereto.